

Application number 09/893,584
Response to office action dated March 15, 2006

REMARKS/ARGUMENTS

General Remarks

Claims 1-8, 17-17, and 22-28 are rejected under 35 U.S.C 103(a) as being anticipated by Santiago *et al.* (U.S. Patent Publication 2002-0186661).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santiago in view of U.S. Patent 6,072,772 issued to Fichou *et al.*

The Fichou reference

The Fichou reference applies to cancelled claim 9 which relates to policing according to "a burst-tolerance guarantee". None of the pending claims in this amendment refers to a burst-tolerance guarantee.

The Santiago reference

Santiago discloses a system for policing flows and subflows of a data stream. The number of flows is arbitrary and any flow may comprise an arbitrary number of subflows. All flows are individually metered (policed) and where necessary the subflows of a flow may be individually policed. Santiago uses a variety of credit-token methods, including the popular leaky-bucket method used in the present invention. As such, Santiago addresses the same problem addressed in the present invention and uses the same (credit based) policing element used in the present invention. However, Applicant respectfully submits that there is no resemblance whatsoever between the method of the present invention and the method of Santiago. Regarding terminology, Applicant notes that the term "subflow" in Santiago corresponds to "traffic class" in the present application.

Santiago uses a hierarchical policing system which meters each flow. Under certain conditions, subflows – if any – of a metered flow may not be considered. Under other conditions, the subflows are metered and packets of any offending subflow are marked as nonconforming.

The hierarchical policing approach is prevalent in many embodiments in Santiago; see for example FIG. 11 and paragraph [0077] in Santiago:

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"Each of the flows may be individually metered 1102, and collectively is bounded by the contracted bandwidth or quality of service (QoS). At some point, bandwidth levels (e.g., credit levels) used for policing flows may fall below a threshold level, as determined at decision block 1104. If the bandwidth levels have not exceeded this threshold, the flows may continue to be metered 1102 without regard to individual subflow metering, and all packets in that flow will receive the same drop probability. However, if the bandwidth exceeds the threshold as determined at decision block 1104, subflows of a particular one or more flows may be metered as shown at block 1106."

The present invention

The present invention provides a policing method and an apparatus which consider all traffic classes of a service (corresponding to all subflows of a flow in Santiago). The traffic classes are considered in a sequential order and policing (metering) each traffic class, except the first, is based on (1) a cumulative service-rate allocations of all traffic classes preceding and including said each traffic class, (2) arriving packets of said each traffic class, and (3) all accepted packets (packets marked as "conforming") of the traffic classes preceding said each traffic class. The objective is to distribute unused capacity allocations in an orderly manner. No such feature is described, or implied, in Santiago.

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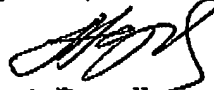
Conclusion

Claims 1-27 have been cancelled by way of this amendment without prejudice or disclaimer regarding the content therein. New claims 28-43 have been introduced to clearly define the invention. No new matter has been added.

Favorable consideration and allowance of claims 28-43 of the application is earnestly solicited.

An advisory action for this application is courteously requested at the Examiner's earliest convenience.

Respectfully submitted,



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